

## **ABSTRACT OF THE DISCLOSURE**

A method and mechanism for modifying computing resources in response to application behavior. A computing system includes a replication component configured to  
5 replicate data storage from a first data volume to a second data volume. In addition, the replication component is configured to monitor application I/O characteristics and store related statistics. I/O characteristics may include size, concurrency, locality, and frequency. I/O characteristics which are stored, and guidelines for modifying system resources based on those characteristics, may be displayed for use by an administrator in  
10 tuning system resources. Periodically, or in response to detecting an event, the replication component may automatically access the statistics and modify the system resources used by the replication system to better accommodate the application's behavior.